Section 6.2

List of Contents

1 Recommended tools and test equipment 1
2 Service PC standard 1
3 Service program for the Digitizer (via Operation terminal) 2
3.1 Overview 2
3.2 Working with the Operation Terminal 4
3.2.1 Password 4
3.2.2 General information 5
3.3 Active keys or allowed functions 5
3.4 Screen Layout 6
3.4.1 Action modes 6
3.4.2 Selection mode: 7
3.4.3 Instruction mode 7
3.4.4 Information mode 8
3.4.5 Decision mode 8
4 Service software of the ID Station 8
5 Processing Station - Overview of the Maintenance Menu 8

1 Recommended tools and test equipment

In addition to the common tools every service engineer is carrying in his tools box, the following auxiliary equipment is required for the service on the ADC COMPACT components:

Equipment	Spare part number	Application
* Service PC * Interface cable RS232, 9pin / 25 pins SUB D	See item 2 9.9999.1008.0	Service program Connection Service PC - Digitizer
Lens cleaning set	MX+06-07-015	Cleaning of optical parts
Densitometer	X-Rite 331 (manual) X-Rite 380/381 (automatic)	Calibration of the film density
Ground tape	CM+9.9999.0830	Replacement of printed circuit boards / EPROMs
Safety lacquer	-	To be used after electronic or mechanical adjustments
Test Board	EB+44060160	To measure the pin diode signal with the oscilloscope
Laser goggles	CM+9.9999.1547.0	Do not perform any adjustments in the opened optical path of the digitizer. When checking the optical path laser goggles have to be put on, in case of laser leak. They provide full protection.
Test sheet 35 x 43 cm	CM+7.8966.1214.0	Test exposures for mechanical adjustments
CCM Tool	see Diginet, in future Mednet	Configuration tool

2 Service PC standard

Note:
The service PC is used:
- to create the adc.cpf file with the CCM tool
- to do service via terminal emulation
- to run the show error program

Minimum standard as follows:

Type:	Laptop with ASCII keyboard
Display:	EGA / VGA compatible
CPU:	Pentium
RAM:	32 MB
Harddisk:	> 500 MB
Floppy disk drive:	3.5", 1,44 MB
Serial interface:	2 x RS232
Operating system:	Windows 9X, Windows NT 4.0

Service PC connection: On a RS232 interface on the ADC Digitizer (behind the front door)

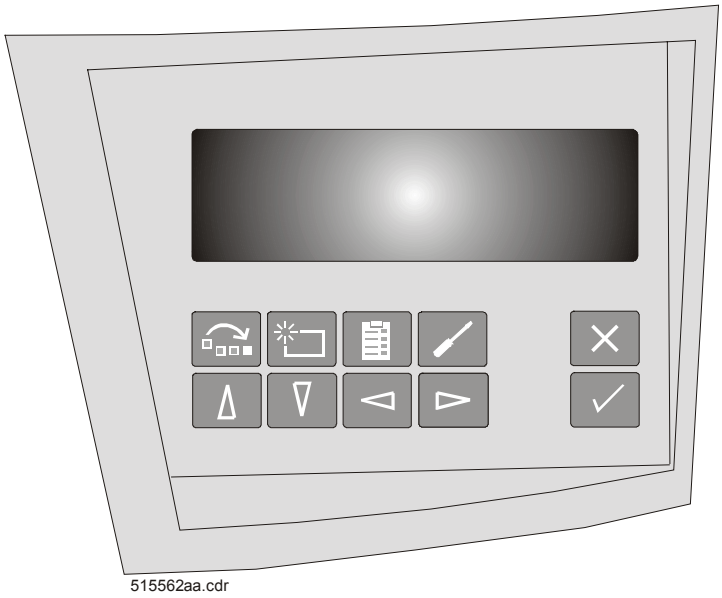
3 Service program for the Digitizer (via Operation terminal)

3.1 Overview

Service level 1	*Service level 2*	*Service level 3*
1 INFO	1 Device info 2 Network info	
2 MAINTENANCE	1 SAL inspection 2 Calibration 3 Test and adjust cycle 4 Confirm maintenance 5 Confirm repair 6 Clear infocounter 7 Confirm installation	 1 Cycle with scan 2 Cycle without scan
3 SAVE on floppy	1 Infocounter 2 Machine specific data 3 Test report 4 Session files 5 CPF-File	
4 SHOW error	1 Explain error code 2 Error hit list	
5 INSTALL from floppy	1 Software 2 Machine specific data 3 PMT settings (mfa/mfb) 4 Laser power factor 5 Pin-diode factor 6 Galvanometer curve 7 CPF-File 8 Language files 9 HW modification ID 10 RS Parameters	
6 CONFIGURE	1 Local network ID 2 User terminal language 3 Direct identification	
7 DIAGNOSTICS	1 Scanning & signals 2 Mechanical modules 3 Erasure unit 4 Image transmission 5 Emergency node	 1 Cass. module & R/F-TAG 2 IP alignment 3 IP transport & vacuum 4 Scanner
8 Checks	1 Quick check 2 Check laser 3 Check destinations 4 Check disk	 1 Laser beam position 2 Laser power on IP Ping to... 1 Hard disk C: 2 Hard disk D: 3 Hard disk E:

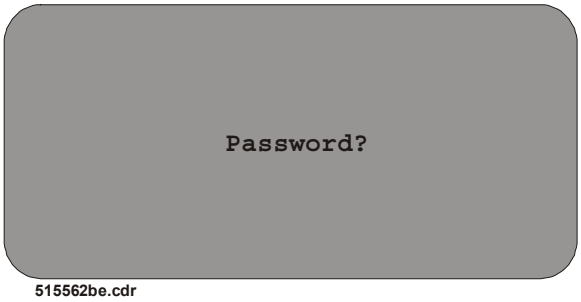
Service level 1	*Service level 2*	*Service level 3*
	5 Send flatfield 6 Send test sheet 7 Check I/O-bus	4 Floppy disk drive 1 Calibration pattern 2 Banding pattern

3.2 Working with the Operation Terminal



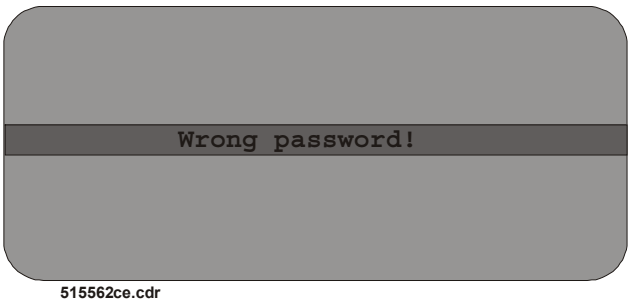
3.2.1 Password

	• Starts or exit the Service mode



Enter password!

A wrong password results in a long beep. The message "Wrong password" appears.



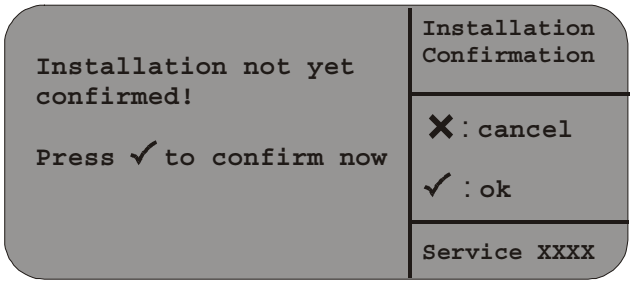
Remark:

- if the correct password has not been entered within 4 seconds, the program returns to the main menu of the key-operator level

- if no key is touched after pressing the service key within 60 sec, the program returns to the operator level

3.2.2 General information

As long as the installation is not confirmed the operator is asked after each start- up if he wants to confirm. The message is shown on the LCD with repeated beeps after a successful start-up. If confirm is answered positively the software branches directly to the “Confirm installation” option. After confirmation it returns to the operator level. The function can be cancelled until next start-up.



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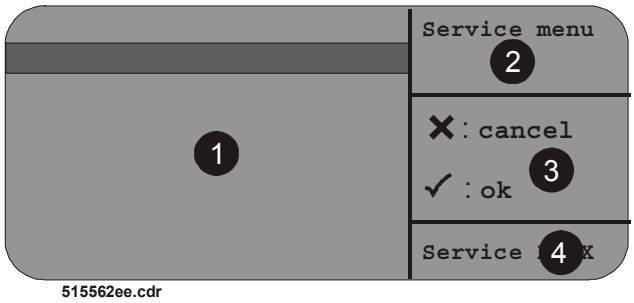
3.3 Active keys or allowed functions

✓	**ok** - starts the highlighted function
✗	**cancel** - cancels the function and returns to the next higher menu level
▽ △	forward or backward **scrolling**
◁ ▷	**tag** - possibility to select several items out of a list
	returns immediately to the operator level, exits the service level

All other keys are inactive and cause a long beep when typing them.
No time out is foreseen in the service level.

3.4 Screen Layout

The same screen layout is used for all service menus. The screen is subdivided into four windows.



- the action window ❶ displays selection lists, instructions, information, questions
- orientation window ❷ displays the current service menu level
- key help window ❸ explains the meaning of the involved key-pad buttons
- service message window ❹ displays service messages

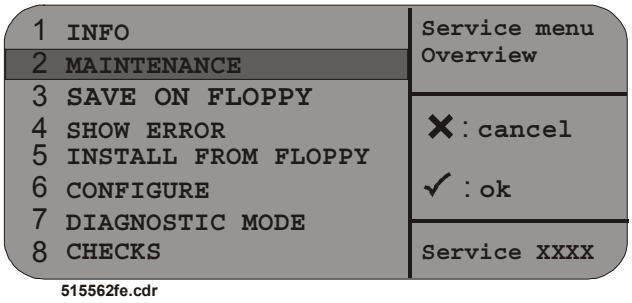
- and is displayed if scroll functionality is requested, e.g. if a list cannot be shown in total
- and is displayed if selection functionality is requested, e.g. if several items have to be marked in a list

3.4.1 Action modes

Four different action modes are possible:

Selection mode,
Instruction mode,
Information mode,
Decision mode.

3.4.2 Selection mode:



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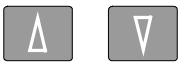
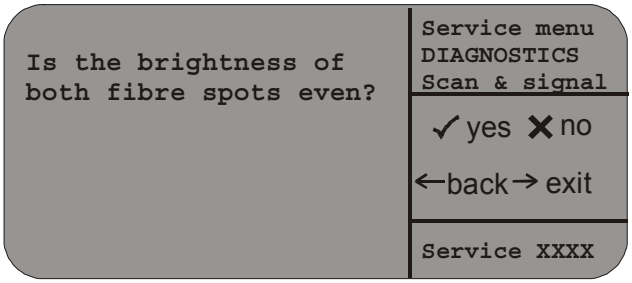
	• a scroll bar (inverse display) highlights an item
	• the default scroll bar position is the first line
	• moves up and down the bar
	• confirms the selection and starts the highlighted sub-menu
	• cancels the current menu and returns to the next higher level

3.4.3 Instruction mode



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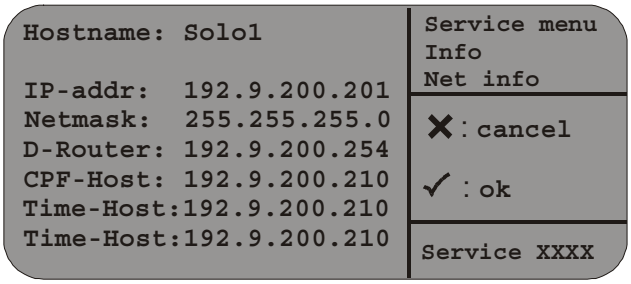
	• gives instructions
	• multiple selections

3.4.4 Information mode

- displays information

Example:



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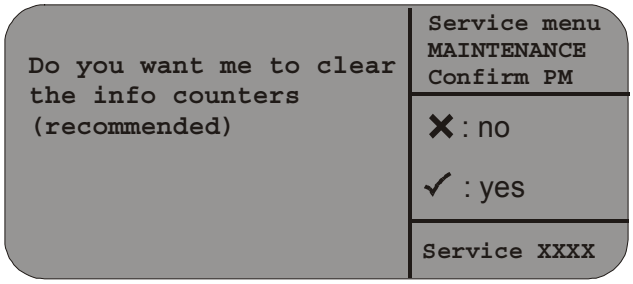
3.4.5 Decision mode

- prompts the user to confirm or cancel the proposed action

Example:



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✓	• confirms the action, returns to the higher level or to the next screen
✗	• cancels the current menu and returns to the next higher level

4 Service software of the ID Station

See Service manual for the ADC System Components, DD+DIS198.00E.

5 Processing Station - Overview of the Maintenance Menu

See Service manual for the ADC System Components, DD+DIS198.00E.